

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical  
Information Center (STIC) no errors detected.**

Application Serial Number: 10/512, 028  
Source: ILFW16  
Date Processed by STIC: 12/14/2006

# ***ENTERED***



IFW16

## RAW SEQUENCE LISTING

DATE: 12/14/2006

PATENT APPLICATION: US/10/512,028

TIME: 13:58:18

Input Set : F:\SEQLIST506612000103.txt

Output Set: N:\CRF4\12142006\J512028.raw

3 <110> APPLICANT: EXPRESSION DIAGNOSTICS, INC.  
 4 Wohlgemuth, Jay  
 5 Fry, Kirk  
 6 Woodward, Robert  
 7 Ly, Ngoc  
 9 <120> TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR DIAGNOSING AND MONITORING  
 10 AUTO IMMUNE AND CHRONIC INFLAMMATORY DISEASES  
 12 <130> FILE REFERENCE: 506612000103  
 14 <140> CURRENT APPLICATION NUMBER: 10/512,028  
 C--> 15 <141> CURRENT FILING DATE: 2004-10-19  
 17 <150> PRIOR APPLICATION NUMBER: PCT/US03/13015  
 18 <151> PRIOR FILING DATE: 2003-04-24  
 20 <160> NUMBER OF SEQ ID NOS: 1065  
 22 <170> SOFTWARE: PatentIn version 3.2  
 24 <210> SEQ ID NO: 1  
 25 <211> LENGTH: 2140  
 26 <212> TYPE: DNA  
 27 <213> ORGANISM: Homo sapiens  
 29 <400> SEQUENCE: 1

(p8-6, 7)

30	agctgaggtg	tgagcagctg	ccgaagtcag	ttccttggtg	agccggagct	gggcgcggat	60
32	tcgccgagge	accgaggcac	tcagaggagg	cgccatgtca	gaaccggctg	gggatgtccg	120
34	tcagaaccca	tgccgcagca	aggcctgccg	cgccctcttc	ggcccagtg	acagcgagca	180
36	gctgagccgc	gactgtgatg	cgctaattgc	gggctgcac	caggaggccc	gtgagcgatg	240
38	gaacttcgac	tttgtcaccg	agacaccact	ggagggtgac	ttcgccctgg	agcgtgtgcg	300
40	gggccttgge	ctgcccgaag	tctaccttcc	cacggggccc	cgccgaggcc	gggatgagtt	360
42	gggaggagge	aggcggcctg	gcacctcacc	tgctctgctg	caggggacag	cagaggaaga	420
44	ccatgtggac	ctgtcactgt	cttgtaccct	tgtgcctcgc	tcaggggagc	aggctgaagg	480
46	gtccccaggt	ggacctggag	actctcaggg	tcgaaaacgg	cggcagacca	gcatgacaga	540
48	tttctaccac	tccaaacgcc	ggctgatctt	ctccaagagg	aagcccta	ccgcccacag	600
50	gaagcctgca	gtcctggaag	cgcgagggcc	tcaaaggccc	gctctacatc	ttctgcctta	660
52	gtctcagttt	gtgtgtctta	attattattt	gtgtttta	ttaaacacct	cctcatgtac	720
54	ataccctggc	cgcaccttgc	ccccagcct	ctggcattag	aattatttaa	acaaaaacta	780
56	ggcgggtgaa	tgagaggttc	ctaagagtgc	tgggcatttt	tattttatga	aatactattt	840
58	aaagcctcct	catcccgtgt	tctccttttc	ctctctcccg	gaggttgggt	gggcgggctt	900
60	catgccagct	acttctcct	ccccacttgt	ccgctgggtg	gtaccctctg	gaggggtgtg	960
62	gtccttccc	atcgctgtca	caggcggtta	tgaaattcac	cccctttcct	ggacactcag	1020
64	acctgaattc	tttttcattt	gagaagtaaa	cagatggcac	tttgaagggg	cctcaccgag	1080
66	tgggggcac	atcaaaaact	ttggagtccc	ctcacctcct	ctaagggttg	gcagggtgac	1140
68	cctgaagtga	gcacagccta	gggctgagct	ggggacctg	tacctcctg	gctcttgata	1200
70	ccccctctg	tcttgtgaag	gcagggggaa	ggtgggggtac	tggagcagac	caccccgctt	1260
72	gccctcatgg	cccctctgac	ctgcactggg	gagcccgctt	cagtgttgag	ccttttccct	1320
74	ctttggctcc	cctgtacctt	ttgaggagcc	ccagcttacc	cttcttctcc	agctgggctc	1380
76	tgcaattccc	ctctgctgct	gtccctcccc	cttgtctttc	ccttcagtac	cctctcatgc	1440

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/512,028

DATE: 12/14/2006

TIME: 13:58:18

Input Set : F:\SEQLIST506612000103.txt

Output Set : N:\CRF4\12142006\J512028.raw

```

78 tccaggtggc tctgaggtgc ctgtcccacc cccacccccca gctcaatgga ctggaagggg 1500
80 aagggacaca caagaagaag ggcaccctag ttctacctca ggcagctcaa gcagcgaccg 1560
82 cccctcctc tagctgtggg ggtgaggggc ccatgtggtg gcacaggccc ccttgagtgg 1620
84 ggttatctct gtgttagggg tatatgatgg gggagtagat ctttctagga gggagacact 1680
86 ggccctcaa atcgccagc gaccttctc atccaccccc tccctcccca gttcattgca 1740
88 ctttgattag cagcggaaaca aggagtcaga cattttaaga tgggtggcagt agaggctatg 1800
90 gacagggcat gccacgtggg ctcatatggg gctgggagta gttgtcttcc ctggcactaa 1860
92 cgttgagccc ctggaggcac tgaagtgtt agtgacttgg gagtattggg gtctgacccc 1920
94 aaacaccttc cagctcctgt aacatactgg cctggactgt tttctctcgg ctcccatgt 1980
96 gtctgtggtc ccgtttctcc acctagactg taaacctctc gagggcaggg accacaccct 2040
98 gtactgttct gtgtctttca cagctcctcc cacaatgtcg aatatacagc aggtgtctca 2100
100 taaatgattc ttagtgactt taaaaaaaaa aaaaaaaaaa 2140
103 <210> SEQ ID NO: 2
104 <211> LENGTH: 506
105 <212> TYPE: DNA
106 <213> ORGANISM: Homo sapiens
109 <220> FEATURE:
110 <221> NAME/KEY: misc_feature
111 <222> LOCATION: (462)..(462)
112 <223> OTHER INFORMATION: n is a, c, g, t or u
114 <220> FEATURE:
115 <221> NAME/KEY: misc_feature
116 <222> LOCATION: (491)..(491)
117 <223> OTHER INFORMATION: n is a, c, g, t or u
119 <220> FEATURE:
120 <221> NAME/KEY: misc_feature
121 <222> LOCATION: (498)..(498)
122 <223> OTHER INFORMATION: n is a, c, g, t or u
124 <400> SEQUENCE: 2
125 ctgtacatct atcgacatgg tgaggtagag catgtttggg aggaaagacg ttgaatccca 60
127 tttggtgaca gtgagcttga ggtgctgcca gaacactgca ctgaagatag gaggagactg 120
129 taggaaatac aagataggaa aggtctccac tgaaatgtta actctttctc tctaaacggc 180
131 catccaggcc tcaatgtctg cagtttctga tctgtgatta tgacttatcc aaatcttaca 240
133 tttcttaaaa atagtcatag atgaagggaa tcacagtga tagttatatg gtgacattag 300
135 tggcttaaat tctaaataac tagaaactgt ataataggca aaactgtgag gcaaataaaa 360
137 tgcttctcaa actgtgtggc tcttatgggg ttaatttgat ttggacctgt attaattctt 420
W--> 139 atggtgtgta tactaacaaa ttccacaact tgggtggttta ancacacaca tttatctctt 480
141 ctgtctggag ncagaagnta aaatga 506
144 <210> SEQ ID NO: 3
145 <211> LENGTH: 1940
146 <212> TYPE: DNA
147 <213> ORGANISM: Homo sapiens
149 <400> SEQUENCE: 3
150 acccaggggc cggcctgcgc cttcccgcga ggcctggaca ctggttcaac acctgtgact 60
152 tcatgtgtgc gcgcgggcca cacctgcagt cacacctgta gccccctctg ccaagagatc 120
154 cataccgagg cagcgtcggt ggctacaagc cctcagtcca cacctgtgga cacctgtgac 180
156 acctggccac acgacctgtg gccgcggcct ggcgtctgct gcgacaggag cccttacctc 240
158 ccctgttata acacctgaca gccacctaac tgccccctga gaaggagcaa tggccttggc 300
160 tcttgagagg taagagcccc gccaccctc tccagatgcc agtccccgag cgccctgcag 360

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/512,028

DATE: 12/14/2006

TIME: 13:58:18

Input Set : F:\SEQLIST506612000103.txt

Output Set: N:\CRF4\12142006\J512028.raw

162	ccggccctga	ctctccgcgg	ccgggcaccc	gcagggcagc	cccacgcgtg	ctgttcggag	420
164	agtggctcct	tggagagatc	agcagcggct	gctatgaggg	gctgcagtgg	ctggacgagg	480
166	cccgcacctg	tttccgcgtg	ccctggaagc	acttcgcgcg	caaggacctg	agcgaggccg	540
168	acgcgcgcac	cttcaaggcc	tgggctgtgg	cccgcggcag	gtggccgcct	agcagcaggg	600
170	gaggtggccc	gccccccgag	gctgagactg	cggagcgcgc	cggctggaaa	accaacttcc	660
172	gctgcgcact	gcgcagcacg	cgtcgtcttc	tgatgctgcg	agataactcg	ggggaccocg	720
174	ccgacccgca	caaggtgtac	gcgctcagcc	gggagctgtg	ctggcgagaa	ggcccaggca	780
176	cggaccagac	tgaggcagag	gcccccgag	ctgtcccacc	accacagggg	gggccccag	840
178	ggccattcct	ggcacacaca	catgctggac	tccaagcccc	aggccccctc	cctgccccag	900
180	ctggtgacga	gggggacctc	ctgctccagg	cagtgaaca	gagctgcctg	gcagaccatc	960
182	tgctgacagc	gtcatggggg	gcagatccag	tcccaaccaa	ggctcctgga	gagggacaag	1020
184	aagggtcttc	cctgactggg	gcctgtgctg	gaggcccagg	gctccctgct	ggggagctgt	1080
186	acgggtgggc	agtagagacg	acccccagcc	ccgggcccc	gcccgcggca	ctaacgacag	1140
188	gcgaggccgc	ggccccagag	tccccgcacc	aggcagagcc	gtacctgtca	ccctccccaa	1200
190	gcgcctgcac	cgcggtgcaa	gagcccagcc	caggggcgct	ggacgtgacc	atcatgtaca	1260
192	agggccgcac	ggtgctgcag	aaggtggtgg	gacacccgag	ctgcacgttc	ctatacggcc	1320
194	ccccagaccc	agctgtccgg	gccacagacc	cccagcaggt	agcattcccc	agccctgcg	1380
196	agctcccgga	ccagaagcag	ctgcgctaca	cggaggaact	gctgcggcac	gtggccccct	1440
198	ggttgacact	ggagcttcgg	gggcccacag	tgtgggcccc	gcgcattggg	aagtgaagg	1500
200	tgtactggga	ggtgggcggc	ccccaggct	ccgccagccc	ctccacccca	gcctgcctgc	1560
202	tgctcggaa	ctgtgacacc	cccatcttcg	acttcagagt	cttcttcgga	gagctggtgg	1620
204	aattccgggc	acggcagcgc	cgtggctccc	cacgctatac	catctacctg	ggcttcgggc	1680
206	aggacctgtc	agctgggagg	cccaaggaga	agagcctggt	cctggtgaag	ctggaacctt	1740
208	ggctgtgccc	agtgcacct	gagggcacgc	agcgtgaggg	tgtgtcttcc	ctggatagca	1800
210	gcagcctcag	cctctgcctg	tccagcgcca	acagcctcta	tgacgacatc	gagtgtcttc	1860
212	ttatggagct	ggagcagccc	gcctagaacc	cagtctaatt	agaactccag	aaagctggag	1920
214	cagcccacct	agagctggcc					1940
217	<210> SEQ ID NO: 4						
218	<211> LENGTH: 1714						
219	<212> TYPE: DNA						
220	<213> ORGANISM: Homo sapiens						
222	<400> SEQUENCE: 4						
223	ggggcatttt	gtgcctgcct	agctatccag	acagagcagc	taccctcagc	tctagctgat	60
225	actacagaca	gtacaacaga	tcaagaagta	tggcagtgac	aactcgtttg	acacggttgc	120
227	acgaaaagat	cctgcaaaat	catttttgag	ggaagcggct	tagccttctc	tataagggtta	180
229	gtgtccatgg	attccgtaat	ggagttttgc	ttgacagatg	ttgtaatcaa	gggcctactc	240
231	taacagtgat	ttatagttaa	gatcatatta	ttggagcata	tgcggaagag	agttaccagg	300
233	aaggaaagta	tgcttccatc	atcctttttg	cacttcaaga	tactaaaatt	tcagaatgga	360
235	aactaggact	atgtacacca	gaaacactgt	tttgttgtga	tgttacaaaa	tataactccc	420
237	caactaattt	ccagatagat	ggaagaaata	gaaaagtgat	tatggactta	aagacaatgg	480
239	aaaatcttgg	acttgctcaa	aattgtacta	tctctattca	ggattatgaa	gtttttcgat	540
241	gcgaagattc	actggatgaa	agaaagataa	aaggggtcat	tgagctcagg	aagagcttac	600
243	tgtctgcctt	gagaacttat	gaaccatatg	gatccctggt	tcaacaaata	cgaattctgc	660
245	tgctgggtcc	aattggagct	gggaagtcca	gctttttcaa	ctcagtgagg	tctgttttcc	720
247	aagggcattg	aacgcacag	gctttggtgg	gcactaatac	aactgggata	tctgagaagt	780
249	ataggacata	ctctattaga	gacgggaaag	atggcaaata	cctgccgttt	attctgtgtg	840
251	actcactggg	gctgagttag	aaagaaggcg	gcctgtgcag	ggatgacata	ttctatatct	900
253	tgaacggtaa	cattcgtgat	agataccagt	ttaatcccat	ggaatcaatc	aaattaaatc	960
255	atcatgacta	cattgattcc	ccatcgctga	aggacagaat	tcattgtgtg	gcatttgtat	1020

## RAW SEQUENCE LISTING

DATE: 12/14/2006

PATENT APPLICATION: US/10/512,028

TIME: 13:58:18

Input Set : F:\SEQLIST506612000103.txt

Output Set: N:\CRF4\12142006\J512028.raw

```

257 ttgatgccag ctctattcaa tactttctcct ctcagatgat agtaaagatc aaaagaattc 1080
259 gaagggagtt ggtaaacgct ggtgtggtac atgtggcttt gctcactcat gtggatagca 1140
261 tggattttgat tacaaaagggt gaccttatag aaatagagag atgtgagcct gtgaggtcca 1200
263 agctagagga agtccaaaga aaacttggat ttgctctttc tgacatctcg gtggttagca 1260
265 attattcctc tgagtgggag ctggaccctg taaaggatgt tctaattctt tctgctctga 1320
267 gacgaatgct atgggctgca gatgacttct tagaggattt gccttttgag caaataggga 1380
269 atctaaggga ggaaattatc aactgtgcac aaggaaaaaa atagatatgt gaaaggttca 1440
271 cgtaaatttc ctcacatcac agaagattaa aattcagaaa ggagaaaaca cagaccaaag 1500
273 agaagtatct aagaccaaag ggatgtgttt tattaatgtc taggatgaag aaatgcatag 1560
275 aacattgtag tacttgtaaa taactagaaa taacatgatt tagtcataat tgtgaaaaat 1620
277 agtaataatt tttcttggat ttatgttctg tatctgtgaa aaaataaatt tcttataaaa 1680
279 ctcggaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 1714
282 <210> SEQ ID NO: 5
283 <211> LENGTH: 6270
284 <212> TYPE: DNA
285 <213> ORGANISM: Homo sapiens
287 <400> SEQUENCE: 5
288 gccctgcttc cccttgccac tgcgcggggc ggccatggac ttgtacagca ccccgccgcg 60
290 tgcgctggac aggttcgtgg ccagaaggct gcagccgcgg aaggagtctg tagagaaggc 120
292 gcggcgcgct ctgggcgcgc tggccgctgc cctgagggag cgcgggggccc gcctcggctg 180
294 tgcctccccg cgggtgctga aaactgtcaa gggaggctcc tcgggcccgg gcacagctct 240
296 caaggggtggc tgtgattctg aacttgtcat ctctctcgac tgcttcaaga gctatgtgga 300
298 ccagagggccc cgccgtgcag agatcctcag tgagatgcgg gcacgcctgg aatcctgggtg 360
300 gcagaaccca gtccctggtc tgagactcac gtttcttgag cagagcgtgc ctggggccct 420
302 gcagttccgc ctgacatccg tagatcttga ggactggatg gatgttagcc tgggtgcctgc 480
304 cttcaatgtc ctgggtcagg ccggctccgc ggtcaaacc cagccacaag tctactctac 540
306 cctcctcaac agtggctgcc aagggggcga gcatgcggcc tgcttcacag agctgcggag 600
308 gaactttgtg aacattcgcc cagccaagtt gaagaacct atcttgcctg tgaagcactg 660
310 gtaccaccag gtgtgcctac aggggttgtg gaaggagacg ctgcccccg tctatgcct 720
312 ggaattgctg accatcttcg cctgggagca gggctgtaag aaggatgctt tcagcctagg 780
314 cgaaggcctc cgaactgtcc tgggcctgat ccaacagcat cagcacctgt gtgttttctg 840
316 gactgtcaac tatggcttcg aggacctgc agttgggcag ttcttgccag gccacgttaa 900
318 gagaccagc cctgtgatcc tggaccagc tgaccccaca tgggacctgg ggaatggggc 960
320 agcctggcac tgggatttgc atgcccagga ggcagcatcc tgctatgacc acctatgctt 1020
322 tctgaggggg atgggggacc cagtgcagtc ttggaagggg ccgggccttc cacgtgctgg 1080
324 atgctcaggt ttgggccacc ccattcagct agaccctaac cagaagacct ctgaaaacag 1140
326 caagagcctc aatgctgtgt acccaagagc agggagcaaa cctccctcat gccagctcc 1200
328 tggccccact gcggagccag catcgtacct ctctgtgcgg ggaatggcct tggacctgtc 1260
330 tcagatcccc accaaggagc tggaccgctt catccaggac cacctgaagc cgagccccca 1320
332 gttccaggag caggtgaaaa aggccatcga catcatcttg cgtgcctcc atgagaactg 1380
334 tgttcacaag gcctcaagag tcagtaaagg gggctcattt ggccggggca cagacctaa 1440
336 ggatggctgt gatgttgaac tcatcatctt cctcaactgc ttcacggact acaaggacca 1500
338 ggggccccgc cgcgcagaga tccttgatga gatgcgagcg cacgtagaat cctggtggca 1560
340 ggaccaggtg cccagcctga gccttcagtt tctgagcag aatgtgcctg aggtctctga 1620
342 gttccagctg gtgtccacag ccctgaagag ctggacggat gttagcctgc tgctgcctt 1680
344 cgatgctgtg gggcagctca gttctggcac caaaccaaat cccaggtct actcgaggct 1740
346 cctcaccagt ggctgccagg agggcgagca taaggcctgc ttcgcagagc tgcggaggaa 1800
348 cttcatgaac attcgccctg tcaagctgaa gaacctgatt ctgctggtga agcactggta 1860
350 ccgccaggtt gcggctcaga acaaaggaaa aggaccagcc cctgcctctc tgcccccagc 1920

```

## RAW SEQUENCE LISTING

DATE: 12/14/2006

PATENT APPLICATION: US/10/512,028

TIME: 13:58:18

Input Set : F:\SEQLIST506612000103.txt

Output Set: N:\CRF4\12142006\J512028.raw

352	ctatgccctg	gagctcctca	ccatctttgc	ctgggagcag	ggctgcaggc	aggattgttt	1980
354	caacatggcc	caaggcttcc	ggacggtgct	ggggctcgtg	caacagcatc	agcagctctg	2040
356	tgtctactgg	acggtcaact	atagcactga	ggacccagcc	atgagaatgc	accttcttgg	2100
358	ccagcttcga	aaaccagac	ccctggtcct	ggaccccgct	gatccacact	ggaacgtggg	2160
360	ccacggtagc	tgggagctgt	tggcccagga	agcagcagcg	ctggggatgc	aggcctgctt	2220
362	tctgagtaga	gacgggacat	ctgtgcagcc	ctgggatgtg	atgccagccc	tcctttacca	2280
364	aacccagct	ggggaccttg	acaagttcat	cagtgaattt	ctccagccca	accgccagtt	2340
366	cctggcccag	gtgaacaagg	ccgttgatac	catctgttca	tttttgaagg	aaaactgctt	2400
368	ccggaattct	cccataaag	tgatcaagg	ggtcaagggt	ggctcttcag	ccaaaggcac	2460
370	agctctgcga	ggccgctcag	atgccgacct	cgtggtgttc	ctcagctgct	tcagccagtt	2520
372	cactgagcag	ggcaacaagc	gggcccagat	catctccgag	atccgagccc	agctggaggc	2580
374	atgtcaacag	gagcggcagt	tgcaggtcaa	gtttgaagtc	tccaaatggg	agaatccccg	2640
376	cgtgctgagc	ttctcactga	catcccagac	gatgctggac	cagagtgtgg	actttgatgt	2700
378	gctgccagcc	tttgacgccc	taggccagct	ggtctctggc	tccaggccca	gctctcaagt	2760
380	ctacgtcgac	ctcatccaca	gctacagcaa	tgcgggagag	tactccacct	gcttcacaga	2820
382	gctacaacgg	gacttcatca	tctctcgcgc	taccaagctg	aagagcctga	tccggtggtt	2880
384	gaagcactgg	taccagcagt	gtaccaagat	ctccaagggg	agaggctccc	tacccccaca	2940
386	gcacgggctg	gaactcctga	ctgtgtatgc	ctgggagcag	ggcgggaagg	actcccagtt	3000
388	caacatggct	gagggcttcc	gcacggtcct	ggagctggtc	accagtagcc	gccagctctg	3060
390	tatctactgg	accatcaact	acaacgccaa	ggacaagact	gttggaagct	tcctgaaaca	3120
392	gcagcttcag	aagcccaggc	ctatcatcct	ggatccggct	gacccgacag	gcaacctggg	3180
394	ccacaatgcc	cgtggggacc	tgtggcccaa	ggaagctgca	gcctgcacat	ctgccctgtg	3240
396	ctgcatggga	cggaatggca	tccccatcca	gccatggcca	gtgaaggctg	ctgtgtgaag	3300
398	ttgagaaaat	cagcggctct	actggatgaa	gagaagatgg	acaccagccc	tcagcatgag	3360
400	gaaattccag	gtcccctacc	agatgagaga	gattgtgtac	atgtgtgtgt	gagcacatgt	3420
402	gtgcatgtgt	gtgcacacgt	gtgcatgtgt	gtgttttagt	gaatctgctc	tcacagctca	3480
404	cacactcccc	tgcctcccat	ggcttacaca	ctaggatcca	gactccatgg	tttgacacca	3540
406	gcctgcgttt	gcagcttctc	tgtcacttcc	atgactctat	cctcatacca	ccactgctgc	3600
408	ttcccaccca	gctgagaatg	ccccctcctc	cctgactcct	ctctgcccct	gcaaattagc	3660
410	tcacatcttt	cctcctgctg	caatccatcc	cttccctccc	ttggcctctc	cttgccaaat	3720
412	ctaaatactt	tatataggga	tggcagagag	ttcccactct	atctgtcagc	cacagtcat	3780
414	tggtagctgg	tacctggagc	cttatcttct	gaagggtttt	aaagaatggc	caattagctg	3840
416	agaagaatta	tctaataaat	tagtgatgtc	tgccatggat	gcagttagag	aaagtgggtg	3900
418	tacaagtgcc	atgattgatt	agcaatgtct	gcactggata	tggaaaaaag	aagggtgctg	3960
420	cagggtttaca	gtgtatatgt	gggtatttga	agagccctct	gagctcggtt	gctagcagga	4020
422	gagcatgccc	atattggctt	actttgtctg	ccacagacac	agacagaggg	agttgggaca	4080
424	tgcattgctat	ggggaccctc	ttgttgga	cctaattgga	tgcctcttca	tgagaggcct	4140
426	cctttttctt	accttttatg	ctgcactcct	cccctagtgt	acacatcttg	atgctgtggc	4200
428	tcagtttgcc	ttcctgaatt	tttattgggt	ccctgttttc	tctcctaaca	tgtgagatt	4260
430	ctgcatcccc	acagcctaaa	ctgagccagt	ggccaaacaa	ccgtgctcag	cctgtttctc	4320
432	tctgccctct	agagcaaggc	ccaccaggct	catccaggag	gctctcctga	cctcaagtcc	4380
434	aacaacagtg	tccacactag	tcaagggttca	gcccagaaaa	cagaaagcac	tctaggaatc	4440
436	ttaggcagaa	agggatttta	tctaaatcac	tggaaagggt	ggaggagcag	aaggcagagg	4500
438	ccaccactgg	actattgggt	tcaatattag	accactgtag	ccgaatcaga	ggccagagag	4560
440	cagccactgc	tactgctaat	gccaccacta	ccccgtccat	cactgccccca	catggacaaa	4620
442	actggagtcg	agacctaggt	tagattcctg	caaccacaaa	catccatcag	ggatggccag	4680
444	ctgccagagc	tgcgggaaga	cggatcccac	ctccctttct	tagcagaatc	taaattacag	4740
446	ccagacctct	ggctgcagag	gagctctgag	catgtatgat	tgaatgggtg	ccaagtgcc	4800
448	gggggaggag	tcccagcag	atgcatcctg	gccatctgtt	gcgtggatga	gggagtgggt	4860

RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/10/512,028

DATE: 12/14/2006  
TIME: 13:58:19

Input Set : F:\SEQLIST506612000103.txt  
Output Set : N:\CRF4\12142006\J512028.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:2; N Pos. 462,491,498  
Seq#:33; N Pos. 82,519,531  
Seq#:55; N Pos. 228  
Seq#:68; N Pos. 115,210  
Seq#:82; N Pos. 8374,9044  
Seq#:83; N Pos. 2141  
Seq#:112; N Pos. 383  
Seq#:127; N Pos. 462  
Seq#:140; N Pos. 182  
Seq#:141; N Pos. 159  
Seq#:164; N Pos. 410,532  
Seq#:186; N Pos. 722,735,744,752,764  
Seq#:204; N Pos. 22  
Seq#:235; N Pos. 292,293,294,295,296,297,298,299,300,301,302,303,304,305  
Seq#:235; N Pos. 306,307,308,309,310,311,312,313,314,315,316,317,318,319  
Seq#:235; N Pos. 320,321,322,323,324,490,491,492,493,494,495,496,497,498  
Seq#:235; N Pos. 499,500,501,688,689,690,691,692,693,694,695,696,949,950  
Seq#:235; N Pos. 951,952,953,954,955,956,957,958,959,960,961,962,963,964  
Seq#:235; N Pos. 965,966,1720,1721,1722,1723,1724,1725,1726,1727,1728,1729  
Seq#:235; N Pos. 1730,1731,1732,1733,1734,1834,1835,1836,1837,1838,1839  
Seq#:235; N Pos. 1840,1841,1842,1843,1844,1845,1846,1847,1848,1849,1850  
Seq#:235; N Pos. 1851,1852,1853,1854,1855,1856,1857,1858,1859,1860,1984  
Seq#:235; N Pos. 1985,1986,1987,1988,1989,1990,1991,1992  
Seq#:236; N Pos. 62,66,67,86,90,91,100,101  
Seq#:243; N Pos. 678  
Seq#:245; N Pos. 72,137  
Seq#:250; N Pos. 173  
Seq#:261; N Pos. 1,579  
Seq#:265; N Pos. 13  
Seq#:266; N Pos. 503  
Seq#:273; N Pos. 417,418  
Seq#:274; N Pos. 457,483  
Seq#:280; N Pos. 374,417,425  
Seq#:285; N Pos. 379,433  
Seq#:294; N Pos. 21,653  
Seq#:307; N Pos. 18,287,461,474,475,476,477,478,479,480,481,482,483,484,485  
Seq#:307; N Pos. 486,487,488,489,490,491,492,493,494,495,496,497,498,499  
Seq#:307; N Pos. 500,501,502,503,504,505,506,507,508,509,510,511,512,513  
Seq#:307; N Pos. 514,515,516,517,518,519,520,521,522,523,524,525,526,527  
Seq#:307; N Pos. 528,577,615  
Seq#:327; N Pos. 74,100,145,154,181,191,241,246,252  
Seq#:340; N Pos. 366  
Seq#:344; N Pos. 15,122,127,131,133,136,137,138,146,147,148,156,162,164,165  
Seq#:344; N Pos. 172,173,175,177,179,190,194,197,202,203,205,206,211,214

**RAW SEQUENCE LISTING ERROR SUMMARY**

DATE: 12/14/2006

PATENT APPLICATION: US/10/512,028

TIME: 13:58:19

Input Set : F:\SEQLIST506612000103.txt

Output Set: N:\CRF4\12142006\J512028.raw

Seq#:344; N Pos. 217,222,228,230,231,241,248,259,261,262,268,271,272,286

Seq#:344; N Pos. 291,296,307,325,326,330,331,333,335,342,344

Seq#:349; N Pos. 393,413,432,443,472

Seq#:361; N Pos. 254,257

Seq#:367; N Pos. 283

Seq#:382; N Pos. 304

Seq#:391; N Pos. 341,346,365



## VERIFICATION SUMMARY

DATE: 12/14/2006

PATENT APPLICATION: US/10/512,028

TIME: 13:58:19

Input Set : F:\SEQLIST506612000103.txt

Output Set: N:\CRF4\12142006\J512028.raw

L:15 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:139 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2 after pos.:420  
M:341 Repeated in SeqNo=2  
L:3002 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33 after pos.:60  
M:341 Repeated in SeqNo=33  
L:4322 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:55 after pos.:180  
L:5342 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:68 after pos.:60  
M:341 Repeated in SeqNo=68  
L:6511 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:82 after pos.:8340  
M:341 Repeated in SeqNo=82  
L:6762 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:83 after pos.:2100  
L:9545 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:112 after pos.:360  
L:10726 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:127 after pos.:420  
L:11925 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:140 after pos.:180  
L:11952 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:141 after pos.:120  
L:13472 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:164 after pos.:360  
M:341 Repeated in SeqNo=164  
L:14990 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:186 after pos.:720  
L:16110 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:204 after pos.:0  
L:18563 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:235 after pos.:240  
M:341 Repeated in SeqNo=235  
L:18660 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:236 after pos.:60  
L:19147 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:243 after pos.:660  
L:19254 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:245 after pos.:60  
M:341 Repeated in SeqNo=245  
L:19535 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:250 after pos.:120  
L:20209 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:261 after pos.:0  
M:341 Repeated in SeqNo=261  
L:20399 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:265 after pos.:0  
L:20464 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:266 after pos.:480  
L:21113 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:273 after pos.:360  
L:21149 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:274 after pos.:420  
M:341 Repeated in SeqNo=274  
L:21303 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:280 after pos.:360  
M:341 Repeated in SeqNo=280  
L:21551 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:285 after pos.:360  
M:341 Repeated in SeqNo=285  
L:21863 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:294 after pos.:0  
M:341 Repeated in SeqNo=294  
L:23409 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:307 after pos.:0  
M:341 Repeated in SeqNo=307  
L:25381 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:327 after pos.:60  
M:341 Repeated in SeqNo=327  
L:25942 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:340 after pos.:360  
L:26300 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:344 after pos.:0  
M:341 Repeated in SeqNo=344  
L:26519 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:349 after pos.:360  
M:341 Repeated in SeqNo=349

**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/512,028

DATE: 12/14/2006

TIME: 13:58:19

Input Set : F:\SEQLIST506612000103.txt

Output Set: N:\CRF4\12142006\J512028.raw

L:27428 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:361 after pos.:240

L:27704 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:367 after pos.:240

L:28979 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:382 after pos.:300